

Title (en)
ELECTROCHEMICAL REACTION UNIT, ELECTROCHEMICAL REACTION CELL STACK, AND PRODUCTION METHOD FOR ELECTROCHEMICAL REACTION UNIT

Title (de)
ELEKTROCHEMISCHE REAKTIONSEINHEIT, ELEKTROCHEMISCHER REAKTIONSZELLENSTAPEL UND HERSTELLUNGSVERFAHREN FÜR EINE ELEKTROCHEMISCHE REAKTIONSEINHEIT

Title (fr)
UNITÉ DE RÉACTION ÉLECTROCHIMIQUE, EMPILEMENT DE CELLULES DE RÉACTION ÉLECTROCHIMIQUE, ET PROCÉDÉ DE PRODUCTION POUR UNITÉ DE RÉACTION ÉLECTROCHIMIQUE

Publication
EP 3588643 A4 20210113 (EN)

Application
EP 18757019 A 20180131

Priority
• JP 2017034322 A 20170227
• JP 2018003129 W 20180131

Abstract (en)
[origin: EP3588643A1] To prevent impairment of the performance of a unit cell, which would otherwise occur due to poisoning caused by a contaminant such as Si. An electrochemical reaction unit includes a unit cell including an electrolyte layer, and a cathode and an anode that face each other in a first direction with the electrolyte layer intervening therebetween; and a felt member containing a ceramic material or a metal and a silica component. The felt member includes both a first crystal structure and a second crystal structure, which is an SiO₂ crystal structure.

IPC 8 full level
H01M 8/02 (2016.01); **C25B 9/00** (2021.01); **C25B 13/04** (2021.01); **H01M 8/0273** (2016.01); **H01M 8/0276** (2016.01); **H01M 8/0282** (2016.01); **H01M 8/0286** (2016.01); **H01M 8/12** (2016.01); **H01M 8/124** (2016.01); **H01M 8/242** (2016.01); **H01M 8/2432** (2016.01)

CPC (source: EP KR US)
C25B 1/04 (2013.01 - EP KR); **C25B 9/00** (2013.01 - EP); **C25B 9/73** (2021.01 - EP); **C25B 9/77** (2021.01 - EP KR); **C25B 13/04** (2013.01 - KR); **H01M 8/0273** (2013.01 - EP KR); **H01M 8/0276** (2013.01 - EP KR); **H01M 8/0282** (2013.01 - EP KR US); **H01M 8/0286** (2013.01 - EP KR); **H01M 8/0662** (2013.01 - KR US); **H01M 8/12** (2013.01 - KR US); **H01M 8/242** (2013.01 - EP KR US); **H01M 8/2432** (2016.02 - EP KR US); **H01M 2008/1293** (2013.01 - EP KR US); **Y02E 60/36** (2013.01 - EP KR); **Y02E 60/50** (2013.01 - EP)

Citation (search report)
• [XA] JP 2011169326 A 20110901 - IBIDEN CO LTD
• [A] US 2002024185 A1 20020228 - GHOSH DEBABRATA [CA], et al
• [A] TANIGUCHI S ET AL: "Improvement of thermal cycle characteristics of a planar-type solid oxide fuel cell by using ceramic fiber as sealing material", JOURNAL OF POWER SOURCES, ELSEVIER SA, CH, vol. 90, no. 2, October 2000 (2000-10-01), pages 163 - 169, XP004213456, ISSN: 0378-7753, DOI: 10.1016/S0378-7753(00)00405-5
• See also references of WO 2018155111A1

Designated contracting state (EPC)
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EP 3588643 A1 20200101; **EP 3588643 A4 20210113**; **EP 3588643 B1 20240703**; CN 110337747 A 20191015; CN 110337747 B 20220802; DK 3588643 T3 20240722; JP 6573719 B2 20190911; JP WO2018155111 A1 20190228; KR 102254281 B1 20210521; KR 20190111092 A 20191001; US 11289727 B2 20220329; US 2021135262 A1 20210506; WO 2018155111 A1 20180830

DOCDB simple family (application)
EP 18757019 A 20180131; CN 201880014234 A 20180131; DK 18757019 T 20180131; JP 2018003129 W 20180131; JP 2018517910 A 20180131; KR 20197024925 A 20180131; US 201816488819 A 20180131